of this I will not be so positive as I am on the two other points, I have never heard of *Bos frontalis* being found even in a semi-domesticated state in Sylhet. Having lived for years in surrounding districts and knowing many persons who have lived in the district, I think indeed it is more than possible I should have heard if this animal is found in Sylhet or not."

Mr. Sclater observed that though he had always wondered at the exceeding tameness of captured specimens of this supposed Wild Ox, the fact that the Gayal was nowhere found in a wild state was quite new to him, and that, as regards the geographical distribution of this and *Bos gaurus*, he was quite willing to assent to Mr. Sarbo's corrections of his statements.

Mr. Sclater called attention to the skin of a brown Crow (*Corvus*), which had been sent to him for examination by Mr. Albert A. C. Le Souef, C.M.Z.S., of the Zoological and Acclimatization Society of Melborne. Mr. Le Souef had written of it as follows :—

"It was shot in Riverina. The gentleman who killed it sent me a similar bird alive about two years ago; and it lived in confinement about a year. On its death I showed it to Prof. McCoy of the Melbourne University; and that gentleman, after a careful examination, pronounced it an albino specimen of the Common Crow (*Corvus australis*). Its eyes, however, were brown like the colour of the feathers, in fact darker. My up-country friend moreover informs me that he has frequently seen these brown Crows in pairs, and has now sent me down the present skin."

Mr. Sclater said that he was inclined to agree with Prof. McCoy that the bird in question was only a variety in plumage of *Corvus australis*; and remarked that such varieties, although rare in a natural state, were by no means unknown, as witness the two creamy-coloured specimens of *Polyborus brasiliensis* formerly living in the Society's Gardens [1].

The following papers were read :—

1. On a Collection of Indian Lepidoptera received from Lieut.-Colonel Charles Swinhoe; with numerous Notes by the Collector. By Arthur G. Butler, F.L.S., F.Z.S., &c.

[Received March 21, 1883.]

(Plate XXIV.)

During the year 1882 I received from Col. Swinhoe (then resident at Mhow) several boxes of Lepidoptera collected by him and his assistants, chiefly at Kurrachee, Solun, and Mhow, between the years 1879 and 1882. As usual with large series from an extended area,

[1] See P. Z. S. 1876, p. 333, et 1878, p. 232.

not a few of the smaller Butterflies and of the Moths prove to be new to science.

RHOPALOCERA.

1. YPTHIMA INICA.

Ypthima inica, Hewitson, Trans. Ent. Soc. ser. 3, vol. ii. p. 284, n. 5, pl. 17. fig. 5 (1865).

Mhow, December 1881 and February 1882.

"Common here ever since November. Is, I presume, *Ypthima inica*. I have one identically the same from Paras Pani, Mirzapore district, N.W. Provinces, taken in February; but the Deesa examples are marked differently on the secondaries below."—*C. S.*

2. YPTHIMA RARA, sp. n. (Plate XXIV. fig. 1.)

Intermediate in character between *Y. norma* and *nareda*; general coloration of the former species, but like the latter in size; smoky greyish brown above, with a large bipupillated ocellus somewhat as in *Y. nareda*, but duller, less oblique, and further from the apex; no submarginal or marginal black stripes; secondaries with a small subanal ocellus, smaller and duller than in *Y. nareda*; under surface grey, densely striated with creamy whitish; no submarginal brown streaks or clouds; ocelli arranged nearly as in *Y. nareda*, but that of the primaries and the third or subanal one of secondaries differing as above. Expanse of wings 37 mm.

Mhow, October 1881.

"Not common here; one taken in September and five in October. Is like my Himalayan examples of *Y. nareda*, Kollar; but the third eye on the secondaries is much smaller, and the submarginal grey streak above and below in all four wings is absent."—*C. S.*

3. NEPTIS EURYMENE, sp. n. (Plate XXIV. fig. 5.)

Nearly allied to *N. eurynome* of Westwood, but smaller, with the costal and outer margins of primaries above straighter. Colour above blacker with purer white markings; spots on the disk smaller; secondaries with an ill-defined whitish streak in the central black belt and a slender white submarginal line: wings below of a purer ochre-yellow colour; the white markings, excepting the discoidal streak of primaries, narrower. Expanse of wings 49 mm.

Mhow, February 1882.

"Like my Aboo examples of *Neptis astola* of Moore; common here in February; have one also from Paras Pani, Mirzapore district, N.W. Provinces, taken in the same month."—*C. S.*

We also possess a *Neptis* from Mount Aboo; it however agrees on the upper surface with *N. aceris* of Europe, and on the under surface is yellow instead of red-brown. It is, in fact, the following species.

4. NEPTIS SWINHOEI, sp. n. (Plate XXIV. fig. 9.)

Only differs above from *N. aceris* in the narrower black border

beyond the white discal series of spots on the secondaries; it differs from the preceding species in this character and in the reduction of the subapical series of white spots on the primaries to three, also in the absence of the submarginal white line on the secondaries; below it is yellower even than *N. eurymene*, the white cuneiform spot beyond the cell of primaries is shorter, the white band of the secondaries broader and straighter, and the yellow belt following it also broader, straighter, and less tapering; from *N. aceris* below the yellow coloration at once distinguishes it. Expanse of wings 45 mm.

Nilgherries.

"This is marked in my collection '*Neptis aceris*.' I have this also from Port Blair and from the Himalayas; have also Moore's variety *nicobarica* from British Burmah."—*C. S.*

N. nicobarica is, however, a good species.

5. Neptis astola.

Neptis astola, Moore, P. Z. S. 1872, p. 560.

Allied to *N. varmona*, but the submarginal series of white spots on the primaries five in number towards apex; the white subbasal band of secondaries straighter and of more even width throughout; the interrupted submarginal pale line whitish towards anal angle, but sometimes wanting; colour below red-brown, redder than in *N. varmona*; the white subbasal band of secondaries not distinctly black-edged, the reddish belt following it even and tapering towards the apex; the macular discal band a little narrower and not distinctly black-bordered; the interrupted white submarginal stripes wider. Expanse of wings 56 mm.

Belgaum.

"This also seems to be *astola*; but there are local differences between my Aboo, Belgaum, and Matheran examples."—*C. S.*

Unless these locally distinct forms are to be regarded as species, we must cease to name Lepidoptera, or, at least, confine ourselves to naming types of genera; in not a few genera we can even now form a gradational series of allied forms, constant to locality, yet exhibiting distinctive characters, which to any but those who have long studied the Lepidoptera might appear to be mere variations; their constancy however, in my opinion, warrants their separation as species.

6. Hypanis polinice.

Papilio polinice, Cramer, Pap. Exot. iv. pl. 375. f. G, H (1782).

Madras[1].

7. Hypanis simplex, sp. n. (Plate XXIV. fig. 8.)

Allied to the African *H. cora*. Wings above tawny with black markings as in little-marked females of *H. ilithyia* of Africa: on the under surface very like *H. cora*, but the black discoidal markings of primaries distinctly white-edged, the subapical white spots larger and clearer, the submarginal black band near external angle reduced to a

[1] A note sent with this species appears to refer to a form unknown to me.

mere undulated stripe; the first and second white bands of secondaries pure, not crossed by coloured veins, edged on both sides with black dots; submarginal white spots less widely separated; an undulated white marginal stripe in place of the pairs of white dots. Expanse of wings 41 mm.

One example, Depalpore, January 1882.

"Depalpore is a lake-district 30 miles north of Mhow."

"A common *Hypanis* here, at Assirghar, and at Depalpore in September and October."—*C. S.*

8. Amblypodia anita.

Amblypodia anita, Hewitson, Cat. Lyc. B. M. p. 14, pl. 8. figs. 90, 91 (1862).

♂ ♀. Madras.

9. Surendra biplagiata, sp. n. (Plate XXIV. fig. 12.)

♂. Near to *S. discalis*, but easily distinguished by having no violet patches on the upper surface of the secondaries and by the grey colouring of the under surface, upon which the markings are extremely indistinct. Expanse of wings 33 mm.

Madras.

10. Deudorix melampus.

Papilio melampus, Cramer, Pap. Exot. iv. pl. 362. f. G, H (1782).

♂, Mhow; ♀, Solun.

"Not common here; one or two taken in September, October, and February; I have also examples from Hydrabad, Sind, and from Belgaum."—*C. S.*

11. Aphnæus elima.

Aphnæus elima, Moore, Ann. & Mag. Nat. Hist. ser. 4, vol. xx. p. 51 (1877).

Mhow, December 1881.

"Not common here (Mhow); taken in November, December, and January: five specimens in all."—*C. S.*

12. Aphnæus bracteatus, sp. n. (Plate XXIV. figs. 10, 11.)

Allied to *A. vulcanus* (the male of *A. etolus*, Cram.); from which it may be distinguished as follows:—The male above with the tawny bands almost as well developed as in the female of that species; the female with the primaries tawny excepting along the inner margin, and crossed by black bands corresponding with those of the under surface; secondaries in both sexes paler, showing the under-surface markings as dark grey bands; the tawny submarginal streak continued to apex and for the most part white in the female. Wings below creamy white, not sordid as in *A. vulcanus*, the bands narrower and of a darker duller red-colour so as to show up the silver spangles distinctly; the fifth band on the primaries free, not united to the sixth as in *A. vulcanus*; on the secondaries the large orange anal

patch is wanting, so that the elbowed continuation of the fifth or submarginal band is distinctly seen; the abbreviated fourth band is also free, not united to the fifth. Expanse of wings, ♂ 27 mm., ♀ 30 mm.

Mhow, ♂ February 1882, ♀ December 1881.

"This *Aphnæus* is fairly common here from October to February."—*C. S.*

The position of this species is between *A. vulcanus* and *A. actis*.

13. Tarucus theophrastus.

Hesperia theophrastus, Fabricius, Ent. Syst. iii. 1, p. 281, n. 32 (1793).

Mhow, September and November 1881.

"Fairly common here from November to January. Like *nara*, but not *nara*; having the markings below in distinct spots, and not connected into lines as in *nara*: I have similar examples from Solun. Typical *nara* is occasionally found here in September and December; at least I took four or five during these months."—*C. S.*

14. Catochrysops patala.

Lycæna patala, Kollar in Hügel's Kaschmir, iv. 2, p. 419 (1848).

Mhow, November and December 1881.

"Common here from October to February. Have not found the typical *cnejus* here yet; it will, however, no doubt turn up when the proper season comes round; in Kurrachee it was found in September and October."—*C. S.*

15. Catochrysops hapalina, sp. n. (Plate XXIV. figs. 2, 3.)

♂. Allied to *C. ella*: above pale lilac with strong pale golden-brown reflections, which sometimes almost overpower the lilac tint; base of wings blackish and blue; a slender blackish marginal line; fringe white; secondaries with a short and very slender black tail edged with white; two white-bordered black spots near anal angle: body blackish: under surface greyish white, with faint golden tints in certain lights; markings as in *C. patala*, but less distinct; the two anal ocelli small, with no metallic scales in the type; the female, however, and such specimens of both sexes as are darker and bluer than the type above have a metallic annulus of green on each ocellus; one male taken in January has this annulus of bright gold. Expanse of wings 26 mm.

♀. Above blackish, the primaries with the exception of a broad apical patch tapering to beyond the middle of the costal border and a broad external border, suffused with bluish lilac; the secondaries with the basal three fifths, excepting towards costa, of the same colour bounded externally by a narrow band of white spots; five submarginal black spots with white borders, those of the last two touched at the back with orange and bluish scales; otherwise almost exactly as in the male. Expanse of wings 27 mm.

Mhow, October and December 1881; var. ♂, January 1882.

This species may readily be distinguished from *C. ella* by the

whiter tint of the under surface and the arrangement of the spots in the transverse series across the disk of primaries, which are placed end to end in a straight line instead of angle to angle; this arrangement brings the last of the series much nearer to the external angle.

"Common in December, but one or two found in October, November, and January."—*C. S.*

What I can only regard as a dwarfed form of this species occurs commonly at Mhow in December and January. Colonel Swinhoe, however, goes further than I do, and thinks that this and other allied forms are all seasonal varieties of *C. cnejus*; he probably means *C. patala*, since *C. cnejus* has the spots across the disk of primaries below arranged angle to angle as in *C. ella*. Colonel Swinhoe further remarks that this small form (of *C. hapalina*) is as beautifully coloured as my *C. contracta*; and observes, "Certainly the *C. contracta* from Madras are really very beautifully coloured; but then, again, the most beautifully coloured *cnejus* come from Madras also—a moist part of India where all bluish-coloured Butterflies are very beautiful."

C. contracta, so far as my knowledge goes, is confined to Candahar: the under-surface markings are different in character from those of either the *C. patala* or *C. cnejus* groups; the spots of the discal series form a broken line, the upper part regular, the lower irregular. Unless such differences are admitted as of specific value, many of the best-established and hitherto universally admitted species will have to be united—an action to which few, if any, careful students of the Lepidoptera will give their sanction.

16. Catochrysops ubaldus.

Papilio ubaldus, Cramer, Pap. Exot. iv. pl. 390. f. L, M (1782).

Mhow, October and November 1881.

"Scarce here; one taken in September, two in October, and one in November."—*C. S.*

17. Zizera pygmæa.

Lycæna pygmæa, Snellen, Tijd. voor Ent. xix. pl. 7. fig. 3 (1876).

Mhow, November 1881.

"An uncommon *Lycæna* here; one taken in October, four in November, and three in December."—*C. S.*

18. Zizera indica.

Lycæna indica, Murray, Trans. Ent. Soc. 1874, p. 525, pl. 10. figs. 2, 3.

Mhow, December 1881 and January 1882.

Colonel Swinhoe separates this into two forms, between which, however, I fail to see any constant difference. The species is very close to *Lycæna karsandra*, of which I think it possible that it may be only a variety; the ocellated marginal series of dusky spots on the under surface of the secondaries, however, are less defined than in *L. karsandra*. Of the first series of specimens Colonel Swinhoe

says, "Very common here in December and January;" and of the second, "Not common here, only eight taken in December and two in January; is smaller than any Kurrachee examples of Moore's *karsandra*, and has a tinge of blue in the fresh specimens which I never observed in the Kurrachee ones."

I must confess my inability to admit the first of these differences: some of the Kurrachee specimens which Colonel Swinhoe sent us are certainly as large as some of the Mhow specimens of *Z. indica*; the blue spot, however, is certainly brighter in the latter.

Var. *decreta*.

Smaller and paler than the preceding; the discal series of black spots across the under surface of the primaries always very large; the other markings badly defined. Expanse of wings 17–19 mm.

Mhow, December 1881 and January 1882.

I am inclined to agree with Colonel Swinhoe that this is probably a small form of the preceding. It appears, however, to be a "very common" one, and therefore may turn out to be as distinct as our *Ganoris brassicæ* and *G. rapæ* are when its life-history has been studied. It is impossible to be sure, from a mere examination of the imago, whether a butterfly or moth is a variety or a species: perhaps one of the best proofs of this may be found in the Geometrid genus *Eugonia* (*Ennomos* auct.), where the moths differ far less than the authenticated varieties of species in other genera (such as *Abraxas* for instance), yet the larvæ are widely distinct both in form and colouring.

19. Terias hecabe?

Papilio hecabe, Linnæus, Mus. Lud. Ulr. p. 249 (1764).

♂ ♀. Mhow, September and November 1881.

The specimens are smaller and paler in colour than the typical Chinese form of the species. Colonel Swinhoe placed it with *T. excavata*, from which, however, it differs in the decidedly broader dark border to the secondaries and the absence of the characteristic irregular subapical brown marking on the under surface of the primaries.

20. Terias hecabeoides.

Terias hecabeoides, Ménétriés, Cat. Mus. Petr., Lep. i. p. 85, pl. 2. fig. 2 (1855).

♂. Mhow, September 1881.

"Not so deep a yellow as the *hecabe* from Kurrachee: black border on secondaries deeper than usual, deeper than any other species of the *hecabe* type in my collection. Common here in September."—*C. S.*

21. Terias æsiope.

Terias æsiope, Ménétriés, Cat. Mus. Petr., Lep. i. p. 85, pl. 2. fig. 3 (1855).

♂ ♀. Mhow, September and October 1881.

Of the male, which Colonel Swinhoe regarded as a variety of the

preceding, he says a few were taken in September only; the females, of which he sends four examples, he regards as representing the *T. hecabeoides* of Ménétriés, of which he says he has never seen a male; he suggests therefore that *T. hecabe* is the male. Both sexes of the two species, however, can readily be distinguished by a comparison of the under surface: in *T. hecabe* and *T. hecabeoides* the irregular transverse brown subapical marking on the primaries is invariably absent and the ordinary markings are somewhat badly defined, whereas in *T. æsiope, excavata, purreea,* and their allies the reverse is the case.

22. Terias excavata.

Terias excavata, Moore, P. Z. S. 1882, p. 252.

♂ ♀. Assirghur, Suttara, Mhow, September to December 1881.

"That these are males and females of one species I have not the least doubt; they are plentiful here; and I have carefully observed them and have also examined over two hundred specimens." "Very common here in latter part of October and all November."—*C. S.*

23. Terias purreea.

Terias purreea, Moore, P. Z. S. 1882, p. 252.

♂ ♀. Mhow, November and December 1881, January 1882.

"Also males and females of one and the same species; I have examined 182 specimens; they commence appearing here the latter part of November, are very common all December, and a few occasionally up to date."—*C. S.*

The above notes upon two nearly allied species of the *hecabe* group are very significant, proving the utter worthlessness of the guesses which have been made of late regarding the variability of species in this group. As is the case with many allied but admittedly distincts pecies (as for instance *Brenthis selene* and *B. euphrosyne*), *Terias excavata* and *T. purreea* evidently emerge from the pupa at a distance of about a month from one another; this interval of time will not admit of the supposition that they may be seasonal forms of the same species.

24. Terias asphodelus, sp. n. (Plate XXIV. fig. 13.)

Similar to *T. irregularis* (P. Z. S. 1882, pl. xii. fig. 3), but constantly considerably smaller; the margin of the secondaries dotted with black: below very similar to *T. fimbriata,* the spots at the extremities of the discoidal cells large, reddish with greyish centres; primaries with a well-developed transverse subapical red-brown irregular streak. Expanse of wings, ♂ 34 mm., ♀ 40 mm.

Mhow and Depalpur, December 1881 to February 1882.

Var. *narcissus.*

Smaller than the type; the border of primaries forming a regular decreasing arched band to the external angle, without a trace of the bisinuation on the median interspaces. Expanse of wings 32 mm.

Mhow, February 1882.

"Not common; a few taken occasionally from November to March."—*C. S.*

25. Teracolus intermissus, sp. n. (Plate XXIV. fig. 4.)

♂. Resembles on both surfaces the female of *T. ochreipennis*, excepting that the black border of the secondaries does not extend beyond the first median branch, is interrupted by three or four unequal white spots, and upon the margin is more distinctly undulated. Expanse of wings 41 mm.

Kurrachee, December 1881.

This, whether it be a species or a variety, is a highly interesting form, since it serves partly to bridge over the gap between *T. vestalis* and *T. amelia* by reproducing a character common to *T. cypræa* and allies.

26. Teracolus ochreipennis.

Teracolus ochreipennis, Butler, P. Z. S. 1876, p. 136, n. 34.

Kurrachee. ♂ ♀, December 1881.

"Quite common in Kurrachee in November and December."

"Apex of primaries and entire surface of secondaries below in both sexes very dark flesh-colour in all freshly emerged specimens, which fades to ochraceous in life but not after death. If you catch a perfectly fresh specimen and put it away, the dark flesh-colour keeps fairly well, even after death; if you expose the under surface to the light, the flesh-colour soon fades into a kind of ochraceous."—*C. S.*

27. Teracolus puellaris.

Teracolus puellaris, Butler, P. Z. S. 1876, p. 136, n. 33.

♂. Kurrachee, June 1880; Larkana, July.

The specimens now sent are all males; of two marked as females, one distinctly shows the divided anal claspers, and the other has the sexual organ exserted; the females of this species are like pale under-coloured females of *T. ochreipennis*, and not yellow below as in the males.

"Very common at Kurrachee from April to August, and an odd one to be taken occasionally in every month of the year."—*C. S.*

The last part of this note must be attributed to the great similarity of the species (especially in the male sex) of this group; worn examples of one species probably continue to turn up until the appearance of the other. Small examples of the following species were associated with the specimens of *T. puellaris*. The males, when of nearly equal size, are extremely difficult to distinguish from one another; and the larger the series of specimens the more this difficulty increases; nevertheless the females are so distinct in coloration that I am unwilling without proof to regard the two forms as of one species.

28. Teracolus vestalis.

Teracolus vestalis, Butler, P. Z. S. 1876, p. 135, n. 32, pl. vii. fig. 10.

♂ ♀. Kurrachee, June 1880.

The females of this species are yellow below, as in the males; sometimes with a row of brown spots on the secondaries.

29. Ixias kausala.

Ixias kausala, Moore, Ann. & Mag. Nat. Hist. ser. 4, vol. xx. p. 49 (1877).

♂ ♀. Depalpore, December 1881, January 1882.

"Very common on the banks of the Depalpore lake in November, December, and January; not observed anywhere else in this district."—*C. S.*

Chiefly differs from what I believe to be the *I. pyrene* of Linnæus in the decidedly narrower black inner border to the apical patch on primaries.

30. Ixias depalpura sp. n. (Plate XXIV. figs. 6, 7.)

Allied to *I. agnivena* of Moore, but differing in the broader and brighter orange patch on primaries and the narrower macular border of secondaries. Wings above white; primaries with the basi-internal area almost to the middle of the wing white, tinted at base and towards the costa with bluish grey; a broad oblique black patch across the end of the cell, continued in the male as a narrow oblique black band to the external angle, so as to separate the basi-internal and apical areas; the latter area bright orange; the costal margin, apex, and external border black-brown, somewhat as in *I. mariannæ*; the disk in the female marked with four small black dots parallel to outer margin: secondaries white, with a marginal series of subconfluent squamose brown spots somewhat as in the female of *I. dharmsalæ*; base greyish. Under surface similar to that of *I. agnivena* and some examples of *I. mariannæ*, but with only four ocelloid spots towards apex upon the disk of primaries and with no large brown patch at external angle; the ocelloid spots on the secondaries are large and white with pale coffee-brown borders. Expanse of wings 48–51 mm.

Five examples. Depalpore, January 1882.

"This *Ixias* is also very plentiful at the same place in company with *I. kausala* in the same months, and has not been observed anywhere else in these parts."—*C. S.*

31. Papilio diphilus.

Papilio diphilus, Esper, Ausl. Schmett. pl. 40 B. fig. 1 (1785–1798).

Dudhi and Shahgunge in the Mirzapore distinct, N.W. Provinces, in February 1882.

The example from Dudhi is smaller than the other; and Colonel Swinhoe regards the two as distinct local forms. This may be so; but hitherto I believe all have been regarded as varieties of *P. diphilus*; and I should be sorry, with single specimens before me, to question the correctness of this view.

32. Chapra mathias.

Hesperia mathias, Fabricius, Ent. Syst. Suppl. p. 433 (1798).

Mhow, October to December 1881.

Colonel Swinhoe considered the specimens to represent two species; but, beyond the fact that some of them are rubbed and faded, I see no difference. Of the fresher specimens Colonel Swinhoe says—"Very common here in September, October, and November, when it is replaced by the following;" and of the faded ones—"Not very common: it is like some of my Kurrachee examples of *Pamphila mathias*; but every specimen I have captured is so worn I am not sure of it." It is of course quite natural that a Butterfly which has been two or three months on the wing should look a little different from freshly emerged specimens.

33. Ampittia maro.

Hesperia maro, Fabricius, Ent. Syst. Suppl. p. 432 (1798).

Madras.

A single male example, having the fulvous patch on the secondaries broader than in our Ceylon male; the species, however, seems to be somewhat variable in this respect.

Colonel Swinhoe sends also a specimen of *Gomalia albofasciata*, but without any information respecting it, his note upon it having been lost.

34. Tagiades meetana.

Tagiades meetana, Moore, P. Z. S. 1878, p. 842, pl. lii. fig. 1.

"Nilgherries; I have also one example from Belgaum."—*C. S.*

The species appears to be fairly common and widely distributed.

Heterocera.

Sphinges.

A *Pergesa*, apparently the female of *P. aurifera* somewhat rubbed, is in the collection, but without any information as to locality &c.

35. Clanis exusta.

Basiana exusta, Butler, P. Z. S. 1875, p. 252, n. 37; Trans. Zool. Soc. vol. ix. p. 595, pl. xciii. fig. 4 (1876).

"Solun, in July."—*C. S.*

36. Polyptychus dentatus.

Sphinx dentata, Cramer, Pap. Exot. ii. p. 42, pl. 125. fig. G (1779).

Polyptychus dentatus, Butler, Trans. Zool. Soc. vol. ix. p. 583, pl. xci. fig. 10, larva (1876).

Belgaum.

"I have one also taken at Mhow in October."—*C. S.*

Bombyces.

37. Syntomis cyssea.

Sphinx cysseus, Cramer, Pap. Exot. iv. pl. 355, B (1782).

Mhow, February 1882.

"Great numbers in the poppy-fields here in January and February; I took two or three here also in the flowers of the male neem tree; have also some from Solun and Umballa."—*C. S.*

Microsemyra, nov. gen.

Aspect of a small *Leucania*, but more nearly allied to *Semyra*[1]. The neuration somewhat similar, but the cell of primaries longer and the veins branching and consequently shorter; secondaries with the cell short, the subcostals branching (as in *Semyra*) from a short footstalk, but the second and third median branches (unlike those of *Semyra*) emitted from a very long footstalk similarly to those of *Œonistis* (see Trans. Ent. Soc. 1877, pl. viii. fig. 18). Thorax clothed with long woolly hair-scales; palpi rather small, not extending beyond the front of the head; antennæ of the male ciliated on both sides, rather short, tapering; legs thick, especially in the male, the anterior and middle pairs short; abdomen long and scantily scaled.

38. Microsemyra pallida, sp. n.

Primaries creamy whitish, with a discal series of linear black dots incurved from below the third median branch; fringe traversed by two indistinct greyish lines; secondaries shining snow-white; thorax cream-coloured; abdomen testaceous, sprinkled with snow-white scales: under surface pure white; primaries of the male streaked longitudinally with grey. Expanse of wings 22 mm.

Mhow, October 1881.

"Scarce here, and only observed in October."—*C. S.*

39. Pharetra consanguis.

Acronycta consanguis, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. iv. p. 358, n. 24 (1879).

Kasauli, in September.

40. Deiopeia pulchella.

Tinea pulchella, Linnæus, Syst. Nat. i. 2, p. 884 (1766).

Mhow, September 1881 and February 1882; Hubb river, Nov. 1879.

Colonel Swinhoe sends a long note respecting this species, in which he suggests that it should be distinguished rather by the markings of the secondaries than of the primaries. He objects that my *D. thyter* is distinguished by the markings of the primaries, and that he can find in India no species to which my description "primaries with the scarlet spots so pale as to be scarcely visible,

[1] I refer this genus to the *Arctiidæ*.

but the black spots large and well-defined," will apply. To these observations I answer by referring him back to my paper, where he will find (in the first place) that in the description of *D. thyter* I say " marginal black border of secondaries narrower (*i. e.* than in *D. pulchella*), the terminal quadrate projection very small;" and (in the second place) that the description quoted by him does not profess to be that of an Indian species, but of a variety of *D. pulchella* frequently occurring in Southern Africa.

41. Argina cribraria.

Phalæna cribraria, Clerck, Icones, pl. liv. fig. 4.

Port Blair, Andamans, in June.

"I have it in many shades of colour from Bombay, Belgaum, Mahabaleshwar, and have taken it here in September, October, and November."—*C. S.*

42. Aganopis orbicularis.

Hypsa orbicularis, Walker, Cat. Lep. Het. ii. p. 445, n. 1 (1854).

South Andamans, in July.

43. Euplocia membliaria.

Phalæna membliaria, Cramer, Pap. Exot. iii. p. 139, pl. 269. figs. C, D (1782).

♀. South Andamans, in July 1880.

Colonel Swinhoe describes a form answering to the male of this species as in his collection from Upper Tenasserim.

44. Charnidas testacea.

♀. *Cycnia testacea*, Walker, Cat. Lep. Het. iii. p. 683, n. 6 (1855).

Mhow, October 1881.

"Not uncommon here in September and October. I took a female also this month (March 1882); have, however, only taken one male, which is smaller and of a uniform mouse-colour; have also a light brick-dust-coloured female from the Himalayas with the transverse streak at the end of the discoidal cell, but without the dots on each side of the streak."[1]—*C. S.*

45. Pachenome detersa.

♂. *Lymantria detersa*, Walker, Cat. Lep. Het., Suppl. ii. p. 365 (1865).

♂. Mhow, September and October 1881.

"Common here from September to February; I have it also from Suttara, taken in November."—*C. S.*

It is to be regretted that Colonel Swinhoe has not sent the female of this species, which is entirely unknown to me, and which would be especially interesting as indicating the relationship of the genus.

A specimen of Moore's *Artaxa pygmæa* (specific name preoccupied) was taken at Kurrachee in May 1879. Colonel Swinhoe has taken it also in February and April.

[1] This description answers to *C. rotundata* = *C. disjuncta*, Wlk.

46. Varmma indica.

Gluphisia indica, Walker, Cat. Lep. Het. v. p. 1039, n. 4 (1855).

♂. Simla.

"I have it also from Dharmsala."—*C. S.*

Hypocalpe, gen. nov.

Allied to *Calpe*, from which it differs as follows:—Male with the antennæ comparatively shorter, much less strongly pectinated; palpi obliquely truncated, the inferior margin being longer than the superior, not acute at the tip; posterior tibiæ broader; primaries with longer costal margin, the outer margin oblique, convex, but not angulated; external angle rounded off; inner margin not excised, but with a slightly developed convexity or depressed flap towards the base; veins similar but longer beyond the cell in all the wings; secondaries with longer costal margin.

47. Hypocalpe fasciata.

Calpe fasciata, Moore, Descr. Lep. Ins. coll. Atkinson, p. 151 (1882).

Solun, in July.

48. Callænia elongata.

Callænia elongata, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. vi. p. 67, n. 12 (1880).

Solun, in August.

"I have it also from Kasauli, taken in September."—*C. S.*

49. Ingura subapicalis.

♀. *Abrostola subapicalis*, Walker, Cat. Lep. Het. xii. p. 883, n. 7 (1857).

Solun (one male).

Identical with *Ingura recurrens* of Walker.

50. Earias tristrigosa.

Earias tristrigosa, Butler, P. Z. S. 1881, p. 614, n. 60.

Kurrachee, January 1879.

This is a faded specimen, the green colour of the primaries having changed to ochreous.

"Taken at Kurrachee also in February and November, and at Assirghar in October; I have one also from Solun."—*C. S.*

Noctuites.

51. Leucania penicillata.

Leucania penicillata, Moore, P. Z. S. 1881, p. 335.

"Solun in March; common there during that month; I have it also from the Nilgherries."—*C. S.*

52. Leucania rufistrigosa.

Leucania rufistrigosa, Moore, P. Z. S. 1881, p. 337.

"N.W. India" (*Moore*).

Colonel Swinhoe has lost his reference to this species, and therefore is unable to give locality or date of capture.

53. Leucania percisa.

Leucania percisa, Moore, MS.

The clue to the locality of this species is also lost. In coll. Hocking.

54. Leucania bivittata.

Leucania bivittata, Walker, Cat. Lep. Het. ix. p. 108, n. 71 (1856).

Mhow, September 1881.

"In great numbers here for about a week in company with *Alaria lanceolata*."—*C. S.*

55. Leucania inferens.

Leucania inferens, Walker, Cat. Lep. Het. ix. p. 105, n. 65 (1856).

Mhow, September 1881.

The note to *L. bivittata* applies also to this species.

56. Caradrina arenacea.

Caradrina arenacea, Moore, P. Z. S. 1881, p. 349.

Umballa, in March,

57. Aletia rudis.

Aletia rudis, Moore, MS.

Solun, in June. In Mr. Hocking's collection.

58. Rhizogramma indica.

Xylophasia indica, Walker, Cat. Lep. Het., Suppl. ii. p. 647 (1865).

Solun, in June.

"Very common in May and June at Solun in 1878."—*C. S.*

59. Laphygma infecta.

Prodenia infecta, Walker, Cat. Lep. Het. ix. p. 196, n. 12 (1856).

♂ var. *Prodenia venustula*, Walker, *l. c.* Suppl. ii. p. 654 (1865).

♂. "Kasauli, in September, common; I have it also from the Nilgherries."

♀. "Solun; taken also at Mhow in October."—*C. S.*

60. Neuria incisa.

Neuria incisa, Moore, P. Z. S. 1881, p. 344.

"Solun, in June; common there."—*C. S.*

61. Mamestra dolorosa.

Mamestra dolorosa, Walker, Cat. Lep. Het., Suppl. ii. p. 667 (1865).

"Solun. I have taken it also at Mhow in November, and at Suttara in the same month."—*C. S.*

62. Mamestra brassicæ.

Phalæna-Noctua brassicæ, Linnæus, Syst. Nat. i. p. 516 (1766)

"Solun, in May; common there in May and June."—*C. S.*

63. Apamea undicilia.

Apamea undicilia, Walker, Cat. Lep. Het. ix. p. 251, n. 18 (1856).

Solun.

64. Perigea serva.

Celæna serva, Walker, Cat. Lep. Het. xv. p. 1689 (1858).
Perigea canorufa, Walker, *l. c.* Suppl. ii. p. 683 (1865).

Solun.

65. Perigea galaxia, sp. n.

♂. Primaries above dark brown, with bronzy brown reflections; ordinary lines black, commencing upon the costa in oblique snow-white dashes; the denticulated discal line very prominent, each denticle terminated externally in a white point; orbicular spot very small, with an iris of white scales, very indistinct; reniform spot large, snow-white, dotted with black and with a greyish central streak; submarginal line very irregular, chiefly indicated by a slender white external edge, external border of wing beyond this line pale; a marginal series of depressed conical black spots; fringe sordid white spotted with brown: secondaries pale bronzy brown, with a greyish tint towards outer margin; fringe cream-coloured, tipped with silvery whitish and traversed by a grey line: body corresponding in general colour with the wings. Under surface pale bronzy brown, almost golden in some lights; primaries with a greyish subtint, and the secondaries, especially towards abdominal border, with a whitish subtint; a dusky stripe beyond the cells, bisinuated in the primaries, arched and macular in the secondaries; a marginal series of black dots; fringe cream-coloured, tipped with grey; pectus silvery greyish; antennæ below reddish. Expanse of wings 30 mm.

The locality is lost; I believe, however, that it occurs at Dharmsala.

66. Ilattia cephusalis.

Ilattia cephusalis, Walker, Cat. Lep. Het. xvi. p. 209, n. 1 (1858).

♂. "Solun, in October; taken there also in July, and at Mhow in October."—*C. S.*

67. Agrotis suffusa.

Noctua suffusa, Denis, Wien. Verz. p. 80, n. 4.

"Solun, in June; have taken it here (Mhow) also in February, and at Quetta in September."—*C. S.*

68. Agrotis aristifera.

Agrotis aristifera, Guénée, Noct. i. p. 266, n. 426 (1852).

Agrotis munda, Walker, Cat. Lep. Het. x. p. 348, n. 99 (1856).

"Solun; took it also at Kurrachee in February, and at Mhow in November, December, and March."—*C. S.*

69. Agrotis fraterna.

Agrotis fraterna, Moore, Descr. Ind. Lep. Ins. coll. Atkinson, p. 116 (1882).

Solun, in June; Nilgherries.

The two examples sent by Colonel Swinhoe differ not a little in the coloration of the primaries, and were consequently numbered differently by him; the specimen from the Nilgherries has the primaries of a uniform grey tint, and might be supposed to represent a local race; but a note following the locality states that it also comes from Solun; the example from the latter locality in the present collection has the whole central area of the primaries dark brown: such variations in the ground-colour of the wings are common in *Agrotis*.

70. Spælotis fragilis, sp. n.

Resembles *Caradrina arenacea* in colouring; is allied to *Spælotis decora*, but smaller and with very ill-defined markings. Primaries sericeous brownish grey, irrorated with dark grey; orbicular spot obsolete; reniform spot represented by a narrow 3-shaped whitish marking; the two ordinary blackish lines indistinct, formed as in *S. latitans* of Europe, but the denticulation of the outer line ill-defined; a marginal series of black points; fringe traversed by dark grey stripes: secondaries sericeous white, slightly pearly, very slightly greyish at external margin, with a series of ill-defined darker points; fringe greyish excepting at the base; thorax grey, abdomen whitish. Under surface shining greyish white; wings with a marginal series of black points; primaries with a blackish subcostal spot halfway between the cell and apex; venter and upper surface of legs grey. Expanse of wings 32 mm.

Solun, in June.

71. Epilecta semiherbida.

Triphæna semiherbida, Walker, Cat. Lep. Het. xi. p. 743 (1857).

The clue to the locality of this example is lost; we, however, have it in the Museum from Darjiling.

72. Epilecta opulenta.

Epilecta opulenta, Moore, MS.

Nilgherries.

The example is imperfect, the wings being broken and the abdomen and antennæ wanting. The species is in Mr. Hocking's collection.

73. Graphiphora c-nigrum.

Phalæna-Noctua c-nigrum, Linnæus, Fauna Suecica, p. 1193.

Solun, in July.

"Ground-colour much darker than any Nilgherry examples of *Graphiphora c-nigrum*. I have also one from Suttara taken in November, primaries quite as dark, secondaries almost as dark as primaries."—*C. S.*

The species varies a good deal in depth of colour.

74. Orthosia externa.

Orthosia externa, Walker, Cat. Lep. Het., Suppl. iii. p. 715 (1865).

No locality given; the type was from Darjiling.

75. Euplexia semifascia.

Hadena semifascia, Walker, Cat. Lep. Het., Suppl. iii. p. 737 (1865).

Nilgherries.

76. Hadena siderifera.

Hadena siderifera, Moore, P. Z. S. 1881, p. 357.

"Solun, in June; common there; I have it also from the Nilgherries."—*C. S.*

77. Alaria lanceolata.

Alaria lanceolata, Walker, Cat. Lep. Het., Suppl. iii. p. 767 (1865).

Mhow, September 1881.

78. Adisura leucanioides.

Adisura leucanioides, Moore, P. Z. S. 1881, p. 368.

"Mhow, October 1881; also took two specimens of this at Puggur Pir near Kurrachee in August 1879."—*C. S.*

The type was from Kutch, from which locality we have specimens in the Museum collection.

79. Heliothis armigera.

Noctua armigera, Hübner, Noct. pl. 79. fig. 370 (1805-24).

Solun, in June; Kurrachee, in January 1880.

80. Heliothis rubrescens?

Thalpophila rubrescens, Walker, Cat. Lep. Het. xv. p. 1681 (1858).

Solun, in July.

It is doubtful whether this is more than a dark reddish variety of

H. armigera. The original description was taken from a specimen collected at Moreton Bay; in New Zealand it is a common form; and in both these localities it is redder than specimens coming from India or Africa. The specimen before me would perhaps be more correctly placed as a dark form of *H. conferta.* Respecting this and the preceding species, Colonel Swinhoe says:—"Three varieties of *Heliothis armigera*: has each a specific name? All these kinds have been captured by me in Sind, Afghanistan, and Central India; I have also single examples of two other varieties."

81. Anthæcia swinhoei, sp. n.

Primaries above laky-brown, shining reddish cupreous in some lights, speckled with blackish, crossed in the middle by a slightly irregular and rather narrow blackish band; apex bordered with blackish; costa spotted with blackish: secondaries bright ochre-yellow, with a rather broad black external border; fringe golden; a slender curved grey line across the centre of the ochreous area: thorax reddish; abdomen blackish, the segments edged with ochraceous. Primaries below blackish with faint lake-red reflections; a large spot at the end of the cell and a submarginal stripe black, but only visible in certain lights; costa and fringe golden ochraceous; secondaries ochreous, grey-speckled; external border greyish, tinted with reddish at apex, bounded internally by two imperfect parallel blackish stripes, a third across the ochreous area as above, but better defined: body below pale golden, sericeous; tarsi banded with grey. Expanse of wings 26 mm.

Assirghur, October 1881.

This is a very distinct and beautiful little species.

82. Eriopus latreillii.

Eriopus latreillii, Duponchel, Suppl. Lép. France, iv. p. 327, pl. 123. fig. 2.

Solun, in June.

This species, being structurally distinct from the other forms hitherto associated with it under *Callopistria*, Hübner, may be regarded henceforth as the type of Treitschke's genus *Eriopus*, under which it stood as *Eriopus quieta.*

83. Plusia nigrisigna.

Plusia nigrisigna, Walker, Cat. Lep. Het. xii. p. 928, n. 87 (1857).

"Kasauli, in September; I have it also from Umballa, and one very dark example from Solun."—*C. S.*

84. Penicillaria delatrix.

Penicillaria delatrix, Guénée, Noct. ii. p. 304, n. 1112 (1852).

Clue to exact locality missing. The Museum examples are all from Java.

85. Cosmophila xanthindyma.

♂. *Cosmophila xanthindyma*, Boisduval, Faune de Madag. pl. 13. fig. 7 (1833).

♀. *Cosmophila indica*, Guénée, Noct. ii. p. 396, n. 1256 (1852).

"♂, Solun; ♀, common at Mhow during September."—*C. S.*

Of the male Colonel Swinhoe says, "also taken at Mhow in October."

86. Gonitis mesogona.

Gonitis mesogona, Walker, Cat. Lep. Het. xiii. p. 1002, n. 10 (1857).

Solun, in July.

87. Gonitis involuta.

Gonitis involuta, Walker, Cat. Lep. Het. xiii. p. 1003, n. 12 (1857).

"Nilgherries; also taken at Kurrachee in June."—*C. S.*

88. Polydesma laudula.

Polydesma laudula, Guénée, Noct. ii. p. 441, n. 1313 (1852).

"Depalpur, November 1881; taken also at Mhow in September."—*C. S.*

89. Lophoptera costata.

Lophoptera costata, Moore, MS.

"Dharmsala, in August."—*C. S.*

This species is in Mr. Hocking's collection; the specimen sent by Colonel Swinhoe has lost its abdomen and antennæ.

90. Gyrtona chalybea, sp. n.

Primaries smoky grey with steel-blue reflections, spotted and striated with blackish; a spot on the reniform marking (which is outlined in black) and two parallel discal series of subconfluent spots golden cupreous; a brown submarginal stripe and a marginal series of black dashes; fringe whitish, traversed by two slender blackish lines: secondaries with the basal half opaline, hyaline white, with black veins; external half dark brown; fringe pure white, traversed by a blackish stripe: thorax blackish; abdomen smoky grey. Wings below opaline white, veins blackish; a broad external dark-brown border; costal area of primaries blackish; four white dots on the costal margin beyond the cell; body below white; legs greyish above. Expanse of wings 33 mm.

"Solun, in September; also taken there in August."—*C. S.*

Although Walker places this genus in the Phycidæ, it differs but little from *Steiria*.

91. Odontodes aleuca.

Odontodes aleuca, Guénée, Noct. iii. p. 51, n. 1382 (1852).

Var. *Briarda bolinoides*, Walker, Cat. Lep. Het. xv. p. 1802 (1858).

Solun, in July.

92. Hypocala aspersa, sp. n.

Primaries above as in *H. plumicornis* of South Africa, leaden grey clouded with olivaceous, this colour, however, being principally confined to a belt before the middle, mottled with chocolate and creamy yellow, especially towards the costa; the reniform spot outlined in chocolate; external border sericeous lilacine, bounded internally by a red-brown and cream-coloured angulated line: secondaries as in *H. subsatura*, black, with a large spot at the end of the cell, two unequal spots on the outer margin, and a looped internal stripe from base ochreous; fringe greyish white towards apex, ochreous towards anal angle, and brown towards base of abdominal margin: thorax greyish brown; abdomen black, greyish-brown at base, banded with pale ochreous. Under surface pale creamy ochreous, with black markings as in *H. subsatura*, but those of the secondaries narrower. Expanse of wings 44 mm.

Solun, in June.

93. Phyllodes roseigera, sp. n.

Nearly allied to *P. consobrina*, but the reniform marking on the primaries less sigmoidal, more nearly as in *P. inspicillator*; the blotch of rose-colour at anal angle of secondaries narrower and more elongated, consequently less orbicular in shape; sometimes faintly clouded or streaked with white, but never with the large central white patch of *P. consobrina*. Expanse of wings 142 mm.

Andamans, in July.

I have seen a considerable number of examples of this species.

94. Sypna punctosa.

Tavia punctosa, Walker, Cat. Lep. Het., Suppl. iii. p. 939 (1865).

"Solun, in May; very common there during that month."—*C. S.*

95. Sypna cyanivitta.

Sypna cyanivitta, Moore, P. Z. S. 1867, p. 70.

"Solun, in June; very common there during that month."—*C. S.*

96. Ophiodes triphænoides.

Ophiodes triphænoides, Walker, Cat. Lep. Het. xiv. p. 1358, n. 11 (1857).

The locality wanting; we have it from the Punjab.

97. Ophiodes fervida, sp. n.

Allied to *O. lunaris* of Europe, but darker and redder than *O. cuprea*; smaller than either. Primaries brownish flesh-colour, sparsely

black-speckled, crossed in the middle by two indistinct widely divergent pale lines, the inner one abruptly angulated towards the inner margin; reniform oblique, its upper half blackish as in *O. hottentota, separans,* &c. (of the *O. vesta* group); a costal black spot halfway between it and the external area, which is zigzag internally as in *O. lunaris* (but not *cuprea*), and bounded internally by a continuous black stripe unlike any species known to me: secondaries mouse-brown, with the entire disk from before the middle of the wing to near the outer margin covered by a diffused black nebula: body pale brown. Under surface pale sandy brown; all the wings crossed by an ill-defined grey discal band. Expanse of wings 47 mm.

Solun, in July.

98. Ophiodes cuprea.

Ophiodes cuprea, Moore, P. Z. S. 1867, p. 74.

Locality missing; we have it from Formosa.

99. Pandesma anysa.

Pandesma anysa, Guénée, Noct. ii. p. 439, n. 1311 (1852).

Locality not recorded.

100. Ophiusa achatina.

Phalæna achatina, Sulzer, Ins. pl. xxii. fig. 4.

"Dugshai; I have it also from Suttara, taken in September."—*C. S.*

101. Ophiusa arctotænia.

Ophiusa arctotænia, Guénée, Noct. iii. p. 272, n. 1711 (1852).

"Solun, in June; dark and less broadly marked with white than my examples of *Ophiusa achatina* from Kurrachee, Mahableshwur and Umballa."—*C.S.*

102. Girpa optativa.

Remigia optativa, Walker, Cat. Lep. Het. xiv. p. 1510, n. 22 (1857).

Locality wanting.

Colonel Swinhoe says that he has this species from the Nilgherries.

103. Byturna digramma.

Bocana digramma, Walker, Cat. Lep. Het., Suppl. iv. p. 1170 (1865).

Mhow, in September 1881.

"Also taken at Kurrachee in June."

This is evidently a variable species: the two characteristic black costal spots are wanting in the type. A specimen, in poor condition, of what may prove to be only another variety was taken by Colonel Swinhoe at Mhow in September; it differs from the more typical example in the clearer colour of its wings, upon which the black costal spots are the only markings to be seen: this form he says was "also taken at Assirghur in October."

104. Aphandala misera, sp. n.

Cinereous; primaries above with a narrow black reniform marking; two or three irregular brown basal transverse lines; a central undulated oblique line, interrupted by the reniform marking; an irregularly undulated whitish discal line broadly bordered with golden brown; a marginal series of black dots; fringe greyish brown, with a whitish basal line: secondaries paler than the primaries, excepting on the external area, which is partly bounded internally by an abbreviated diffused brownish stripe from the abdominal margin; fringe as in primaries: abdomen rather paler than the thorax. Primaries below grey, sericeous, with whitish inner border; secondaries whitish, grey-speckled, and traversed beyond the middle by two ill-defined irregular grey stripes; body below whity brown. Expanse of wings 21 mm.

From four examples, all more or less rubbed, taken at Assirghur in October 1881; it occurs also at Mhow in the same month.

A second species, apparently referable to *Aphandala*, and taken at Mhow in September, is represented by a single broken example, the body of which has been somewhat crushed so as to render its identification uncertain. A third form, possibly referable to Walker's genus *Cataba* or the old genus *Rivula*, has lost its palpi and therefore cannot be described; it was obtained at Kurrachee in January 1880. A fourth form, belonging to the same group of genera, is rubbed beyond all possibility of recognition; it was taken at Mhow in September 1881.

I note the above to show, in the first place, that the Lepidoptera of Mhow and Kurrachee are as yet far from being exhausted, and, in the second place, to induce collectors of the smaller forms to pay especial attention to the perfect condition of the specimens which they send home: the absence or distortion of the palpi frequently renders the proper allocation of Lepidoptera a hopeless task.

105. Bleptina morosa.

Bleptina morosa, Butler, Ill. Typ. Lep. Het. iii. p. 64, pl. lvi. fig. 15 (1879).

Solun.

Pyrales.

106. Pyralis elachia.

Pyralis elachia, Butler, Ill. Typ. Lep. Het. iii. p. 70, pl. lviii. fig. 3 (1879).

Solun.

107. Pyralis platymitris, sp. n.

Primaries above very like those of *P. elachia*, but the dark areas of a more chocolate colour, and the central belt of a sordid sandy whitish tint; the inner edge of this belt is angulated somewhat as in *P. farinalis*; the outer edge, however, is nearly straight, and the external brown area consequently broader: secondaries altogether darker than in

either species, the base, central belt, and external area being only slightly paler than on the primaries. Expanse of wings 24 mm.

Solun.

108. Pyralis lucillalis.

Pyralis lucillalis, Walker, Cat. Lep. Het. xvii. p. 268, n. 21 (1859).

Solun.

The type of this species was from China.

109. Aporodes meleagrisalis.

Herbula meleagrisalis, Walker, Cat. Lep. Het. xvii. p. 324, n. 11 (1859).

"Kurrachee, March 1880; taken there in February, March, and April; at Lachana, Sind, in July; at Kotree, Upper Sind, in March; Quetta in January and March; Metazai, South Afghanistan, in May: plentiful."—*C. S.*

110. Samea inscitalis.

Ædiodes inscitalis, Walker, Cat. Lep. Het., Suppl. iv. p. 1297 (1865).

Mhow, September 1881.

This species is nearly allied to *S. ecclesialis* of Guénée.

111. Salbia? perspicualis.

Zebronia perspicualis, Walker, Cat. Lep. Het., Suppl. iv. p. 1347 (1865).

Botys? flexissimalis, Walker, *l. c.* p. 1426 (1865).

Mhow, October 1881.

This form agrees better with *Salbia* than with *Zebronia*.

112. Paraponyx affinialis.

Paraponyx affinialis, Guénée, Delt. et Pyral. p. 270, n. 259 (1854).

Mhow, October 1881.

113. Hydrocampa tenera, sp. n.

Allied to *H. rivulalis*, much smaller. Snow-white, with brown markings as follows:—primaries with two brown lines across the base, followed by an oblique abbreviated costal line; two irregular oblique parallel lines before the middle, united towards their inferior extremities to two more slender parallel angulated lines, which commence in a pale quadrate patch enclosing a black spot at the end of the cell; a third pair of lines near the external border, their upper portion running obliquely from the costa to the external border near the external angle, which they then bound to inner margin; external border bounded internally by a brown line excavated in the middle, and brownish at apex and external angle: secondaries with a tapering brown fascia across the end of the cell and two parallel lines, the outer of which limits the external border, the latter brown,

slightly paler than the lines: abdomen spotted with sandy brownish. Wings below with markings rather paler than above; body white. Expanse of wings 13 mm.

"Mulleer river near Kurrachee, November 1879; also one taken at Kurrachee in January and one in May."—*C. S.*

114. Botys ilusalis.

Botys ilusalis, Walker, Cat. Lep. Het. xviii. p. 705, n. 277 (1859).

Solun, in August.

115. Botys aurea?

Botys aurea, Butler, Ill. Typ. Lep. Het. iii. p. 76, pl. lix. fig. 11 (1879).

"Mhow, October 1881: scarce, the only one taken here; I have it also from Solun taken in July."—*C. S.*

116. Botys signatalis.

Botys signatalis, Walker, Cat. Lep. Het., Suppl. iv. p. 1444 (1865).

Solun.

117. Botys abstrusalis.

Botys abstrusalis, Walker, Cat. Lep. Het. xviii. p. 663, n. 204 (1859).

"Mhow, September and October 1881; taken here also in November, and at Kurrachee in April and November."—*C. S.*

118. Ebulea catalaunalis.

Botys catalaunalis, Duponchel, Lép. de France, viii. p. 330, pl. 232. fig. 8.

Botys venosalis, Walker, Cat. Lep. Het., Suppl. iv. p. 1401 (1865).

"Mhow, October 1881; also taken at Kurrachee in May."—*C. S.*

119. Nymphula interpunctalis?

Pyralis interpunctalis, Hübner, Pyral. ii. pl. 19. fig. 128.

"Muggur Pir, August 1879; Kurrachee, May 1880; also taken at Kurrachee and at Larkana in the month of July."—*C. S.*

This seems to be the European species; but the two examples sent by Colonel Swinhoe are somewhat rubbed.

120. Godara incomalis.

Pionea incomalis, Guénée, Delt. et Pyral. p. 369, n. 454 (1854).

"Kurrachee, May 1879; also taken there in April."—*C. S.*

Geometrites.

121. Celerena andamana.

Celerena andamana, Felder and Rogenhofer, Reise der Novara, Lep. iv. pl. cxxx. fig. 18 (1875).

♂. South Andamans, July 1880.

"I have it also from Upper Tenasserim, taken in August."—*C. S.*

122. Nyctalemon najabula.

Nyctalemon najabula, Moore, P. Z. S. 1877, p. 620.

♂ ♀. South Andamans, August 1880.

123. Hyperythra swinhoei.

♂. *Hyperythra swinhoei*, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. v. p. 223 (1880); P. Z. S. 1881, p. 614, n. 61.

♀. "Mhow, February 1882; taken also at Depalpore late in November; there are two examples in my collection from Solun, month not marked, and one from Umballa taken in April

"Corresponds with my Kurrachee examples of *Hyperythra phantasma*, named by you in P. Z. S. May 1881, p. 615, except as to shade of ground-colour of wings; but one of the Solun examples is identically the same as the Kurrachee ones."—*C. S.*

The example sent is of a brownish flesh-tint; it is darker and more strongly marked than the males hitherto received; it has the characteristic subapical black spots on the secondaries strongly defined; in *H. phantasma*, an almost white species, of which I only know the female, these spots are entirely absent. A male (in the Museum collection) appears to me to be unquestionably a dark form of *H. swinhoei*; it is of the same colour as the female now sent; and was taken by my sister, Dr. F. Butler, at Jubbulpore.

124. Nemoria carnifrons, sp. n.

Pale opaque emerald-green; wings crossed beyond the middle by a straight white stripe; fringe whitish; primaries with the costa white; vertex of head pale buff; frons reddish brown: collar and shoulders white, thorax and tegulæ green; abdomen white: wings below paler than above; body below white; anterior coxæ and femora reddish. Expanse of wings 24 mm.

"Mhow, in September 1881, common here during that month. I have also specimens from Solun taken in June."—*C. S.*

125. Nemoria pruinosa.

Nemoria pruinosa, Butler, Ann. & Mag. Nat. Hist. ser 5, vol. v. p. 224, n. 19 (1880); P. Z. S. 1881, p. 616, n. 64.

"Kurrachee, September 1879; one taken there in May, and three in December."—*C. S.*

126. Thalassodes, sp.

Probably a new species, but not in sufficiently good condition for description.

"Mhow, September 1831; not common here."—*C. S.*

127. Ephyra dharmsalæ, sp. n.

Deep flesh-reddish; wings deeper reddish towards external border; a central irregular rather narrow greyish band with slightly darker borders; basal third of primaries traversed by five parallel ill-defined reddish lines; the central band on these wings marked with

two slightly darker spots, one subcostal, the other on the second median interspace; costal border slightly paler than the rest of the ground-colour, unspotted: under surface pale flesh-tinted, with minute dusky discocellular dots. Expanse of wings 30 mm.

Dharmsala.

128. Ephyra cleoraria.

Acidalia cleoraria, Walker, Cat. Lep. Het. xxiii. p. 792, n. 275 (1861).

"Mhow, October 1881 and February 1882; also taken here in March, at Depalpore in November, and at Assirghur in October; I have also one example from Solun."—*C. S.*

129. Idæa invalida?

Acidalia invalida, Butler, Ann. & Mag. Nat. Hist. ser 5, vol. iv. p. 439, n. 75 (1879).

"Kurrachee, December 1879; one also taken there in May: it is scarce."—*C. S.*

The example sent to me is in bad condition, but it appears to be the same as the Japanese species.

130. Idæa negataria.

Acidalia negataria, Walker, Cat. Lep. Het. xxii. p. 751, n. 193 (1861).

"Depalpore, November 1881; only one taken there, and one also taken at Mhow in October."—*C. S.*

131. Idæa absconditaria.

Acidalia absconditaria, Walker, Cat. Lep. Het. xxiii. p. 757, n. 203 (1861).

"Mhow, October and December 1881; also taken here in November, but is not common."—*C. S.*

132. Idæa walkeri.

Acidalia extimaria, Walker, Cat. Lep. Het. xxiii. p. 794, n. 280 (nec 252) (1861).

"Mhow, January 1882; one other taken in October."—*C. S.*

133. Idæa inductata.

Acidalia inductata, Walker, Cat. Lep. Het. xxiii. p. 792, n. 276 (1861).

"Kurrachee, February and December 1879; taken there occasionally in May, November, and December, but not common."—*C. S.*

The specimens were separated under two numbers by the collector.

134. Hyria bilineata, sp. n.

Ochreous; wings sericeous, sparsely striated with ferruginous; a nearly straight line, from costa of primaries to abdominal margin of secondaries, a little before the middle, and an irregular submarginal

stripe, zigzag on the primaries, greyish ferruginous; external border rather densely irrorated with ferruginous; costal margin of primaries reddish; head reddish: under surface pale creamy ochreous; wings with the costal borders to the end of the discoidal cells darker: dark-brown discocellular dots; the straight line of the upper surface indistinctly visible through the wings; a rather broad greyish-brown external border. Expanse of wings 17 mm.

"Assirghur, October 1881; common there during October."—*C. S.*

135. Erosia theclata.

Erosia theclata, Guénée, Phal. ii. p. 36, n. 951 (1857).

Erosia adjutaria, Walker, Cat. Lep. Het. xxiii. p. 849, n. 34 (1861).

Solun, in August.

136. Macaria peremptaria.

Macaria peremptaria, Walker, Cat. Lep. Het. xxiii. p. 929, n. 111 (1861).

"Mhow, October 1881; also taken at Kurrachee in November and December; a scarce *Macaria* there, as it is here, the one I am sending you being the only one secured here."—*C. S.*

137. Tephrina granitalis, sp. n.

Greyish white, densely irrorated with smoky-grey striæ; the body very dark; a spot at the end of each cell and the external borders of the wings dark grey; these borders are rather broad and have a regular straight inner edge; the secondaries are much less densely striated than the primaries, and therefore appear to be whiter: under surface white, sparsely striated with grey; wings with discocellular spots and external border grey, the latter partly interrupted by white streaks through their lower half. Expanse of wings 30 mm.

"Mhow, September 1881; another scarce *Macaria*, only two having been taken."—*C. S.*

138. Tephrina lithina, sp. n.

Pale sandy stone-colour; wings sparsely striated with dark brown; a brown discocellular spot with black-and-white centre on each wing; a disco-submarginal brown band, wider and darker on the secondaries than on the primaries, and a marginal series of imperfect brown dots: wings below with the markings decidedly redder and more distinct than above. Expanse of wings 28 mm.

"Kurrachee, July 1879; I have this also from Solun and from Umballa, taken in March."—*C. S.*

139. Tephrina zebrina, sp. n.[1]

Allied to *T. strenuata* from the Punjaub; similar in form to

[1] Felder and Rogenhofer refer species of this group to *Fidonia*; but I doubt the possibility of separating them structurally from *Tephrina*.

T. lithina, and having similar markings; the wings, however, paler, the discal band on the primaries edged internally by a black angulated stripe, close to the centre of which also is a black spot; two other black stripes cross the same wings, the three being at equal distances apart; the secondaries are crossed by a grey-blackish stripe at the basal third, and the disco-submarginal band is partly bounded internally by a black stripe, near the extremity of which it bears a small black spot: on the under surface the pattern is similar to that of *T. lithina*, but the markings are bronze-brown. Expanse of wings 26 mm.

"Mhow, March 1882. Is this another form of the variable *Macaria strenuataria* of Walker?"—*C. S.*

The species is nearer to Walker's "*Macaria*"! *strenuata* than to his *M. strenuataria*; it is probable, from the similarity in the two names, that these nearly allied forms have got confounded in Colonel Swinhoe's collection, and have thus led him to regard the species as variable.

140. NADAGARA[1] GRISEA, sp. n.

Pearl-grey; primaries crossed by two widely separated dark-brown lines, the inner one straight, the outer one strongly angulated above the middle and inarched on each side of the angle; a slender brown marginal line: secondaries crossed just beyond the middle by a slightly angulated but nearly straight dusky line; a slender marginal line. Primaries below pearl-grey; the costal area pale yellow, speckled with grey and crossed towards apex by a brownish line; a slender black marginal line; fringe dark grey with a pale yellow basal line; secondaries pale creamy yellow, grey-speckled; a nearly rectangular dark-brown line across the disk; a slender marginal black line; fringe pale yellow. Expanse of wings 32 mm.

Exact locality wanting.

DELOCHARIS, gen. nov.

Aspect of *Idæa* (*I. aversata*), but allied to *Coremia*. Primaries elongated, acuminate, but not falcate; secondaries comparatively short, pyriform; discoidal cells not extending to the middle of the wings; costal vein of primaries extending to second third of costal margin; subcostal five-branched—first branch emitted at some distance before the end of the cell, united beyond the cell by a short cross vein to the second, the three following branches (including the second) branching off at regular intervals, the third and fourth forming a long fork to apex, the fifth branch emitted from below the vein in a line with the cross veinlet; radials normal, the upper radial from the anterior angle of the cell; discocellulars transverse, very slightly inarched; second and third median branches emitted near together from the posterior angle of the cell; costal and subcostal veins of secondaries closely approximated at their origins;

[1] The position of this genus is at present undecided; it probably should be near to *Drepanodes*.

subcostal branches forking from a long footstalk; discocellulars oblique; median branches as in primaries. Palpi erect, not reaching to a level with the top of the head; eyes large and prominent; antennæ long, simple; abdomen moderately robust and rather short, not reaching to the anal angles of the secondaries; legs long, moderately slender.

141. Delocharis herbicolens, sp. n.

Pinky whitish; wings with the basal third slightly brownish; a black dot at the end of each discoidal cell; a nearly straight red-brown discal band with darker edges, and a brownish external border limited internally by a darker undulated line; these bands are less defined on the secondaries than on the primaries; on the under surface they are paler on all the wings. Expanse of wings 33 mm.

"Solun, common in grass; but the month unfortunately is not recorded."—*C. S.*

142. Coremia, sp.

A broken and headless specimen of a species near to *C. ferrugata* of Europe.

No exact locality recorded.

The Phycidæ of the collection were submitted to M. Ragonot for examination; but he pronounced them to be too much worn for determination, in which verdict I perfectly agree with him.

Crambites.

143. Jartheza chrysographella.

Chilo chrysographellus, Kollar, Hügel's Kaschmir, p. 494 (1848).

"Mhow, February 1882; taken here also in March and November."—*C. S.*

144. Crambus todarius, sp. n.

Shining snow-white; primaries with a longitudinal diffused golden-brown streak below the cell; secondaries slightly sordid at apex: primaries below smoky brown with shining white borders; secondaries shining white, with the veins towards costa brown. Expanse of wings 23 mm.

Neilgherries.

Tortricites.

145. Cacoëcia micaceana?

Cacoecia micaceana, Walker, Cat. Lep. Het. xxviii. p. 314, n. 21 (1863).

Solun.

146. Pædisca decolorana?

Pædisca decolorana, Freyer, Neuere Beiträge, 318, 5 (1831–58).

Kurrachee, May 1879.

Our European example of this species is rubbed; and the specimen before me is distorted through the rusting of the pin; the general

tint, and the pattern where I am able to compare it, agrees, as also the structure.

Tineites.

147. Tegna hyblæella.

Tegna hyblæella, Walker, Cat. Lep. Het., Suppl. v. p. 1810 (1866).

"Mhow, September 1881; scarce."—*C. S.*

148. Gelechia, sp.

A black species, apparently nearest to *G. infernalis* of Europe, but too much broken (only half a palpus remains, and no antennæ) to be described.

"Mhow, October 1881; common for about a week."—*C. S.*

It is a pity that only a single injured example was sent; without palpi, it is not even certain that the species is a *Gelechia*, though I have very little doubt that it is.

149. Depressaria swinhoei, sp. n.

Allied to *D. culcitella*. Stramineous; the primaries with two black dots placed longitudinally and slightly obliquely, in and at the end of the discoidal cell; a curved marginal series of dusky dots; secondaries with the basi-abdominal half whitish; wings below without markings. Expanse of wings 16 mm.

Mhow, October 1881.

150. Ypsolophus robustus, sp. n.

Thorax and primaries pale ash-grey, the latter with two small elongated blackish spots, one in the cell before the middle of the wing, the other below the extremity of the cell; a marginal series of dusky dots; secondaries and abdomen whitish; the long tapering fringe of the palpi black, tipped in front with white: primaries below fuliginous brown; secondaries and body white. Expanse of wings 17 mm.

"Kurrachee, September 1879; one taken there in each of the months of February, September, November, and December."—*C. S.*

The remainder of the Microlepidoptera are too much broken to be determined.

In a collection, the account of which I published last year (Ann. & Mag. Nat. Hist. ser. 5, vol. ix. pp. 206–211), I indicated an imperfect female *Hipparchia* as possibly *H. anthe*; the male of *Epinephele roxane* was in the same collection. Major Marshall (P. Z. S. 1882) states that the "specimens" identified as *H. anthe* have been sent to him by Col. Swinhoe and prove to be females of *Epinephele roxane*. As I know both sexes of the latter, and am not likely to regard a rubbed specimen as belonging to another genus, it is clear that Col. Swinhoe, through press of official business, has made a mistake in labelling his specimens; indeed this is *evident* from the fact that *more than one* specimen was sent to Major Marshall.